Science, Service, Stewardship

National Science Workshop on Implementation of Annual Catch Limits

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Mandate From MSFCMA

National Standard 1:

- Conservation and management measures shall *prevent overfishing* while achieving…the *optimum yield* from each fishery...

Fishery Management Plans must:

- specify <u>objective</u> and <u>measurable</u> criteria for identifying when a fishery is overfished
  - how the criteria were determined
  - relationship of criteria to <u>reproductive potential</u>
- Annual catch limits for all fisheries
  - Such that overfishing does not occur
  - Cannot exceed fishing level rec. of SSC/peer review
  - Based on best science information available
  - With accountability measures

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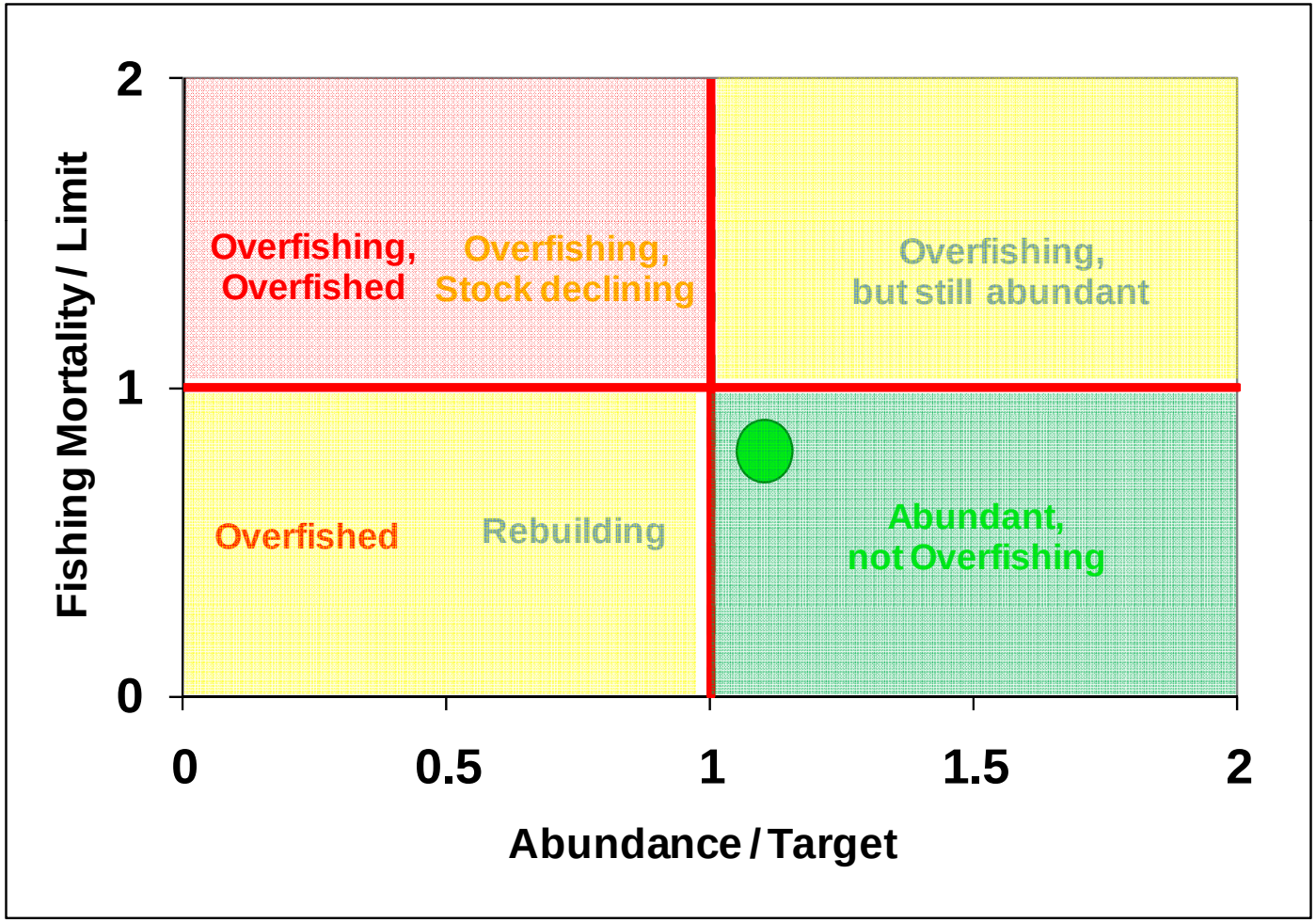
Status Determinations – Since 1996



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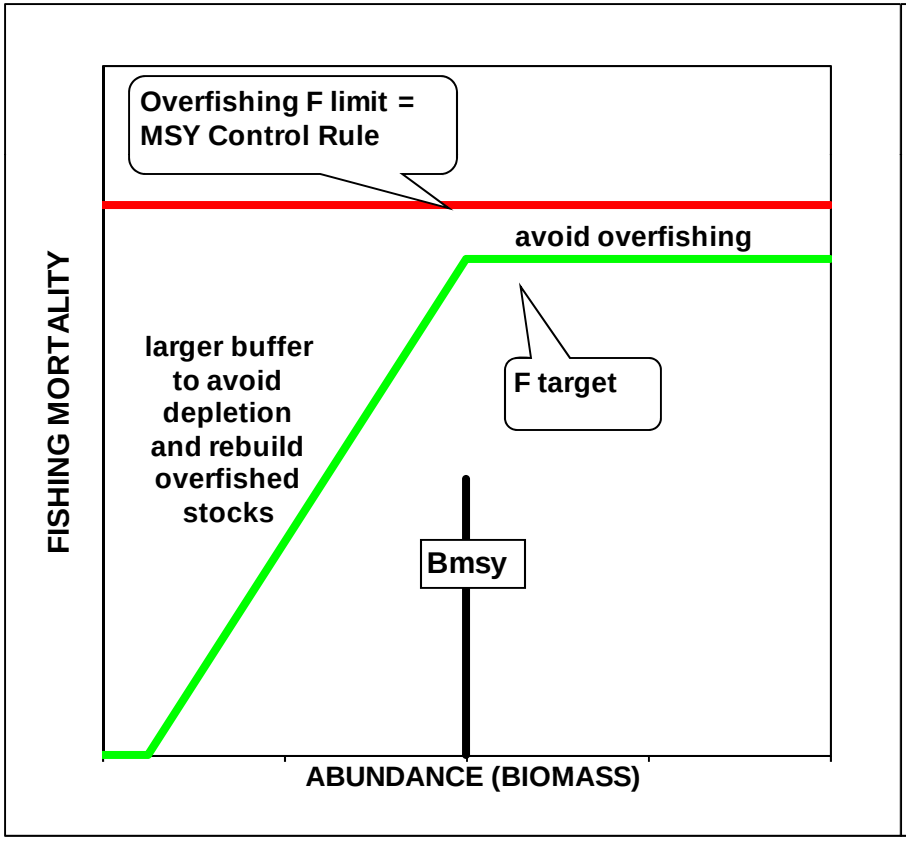
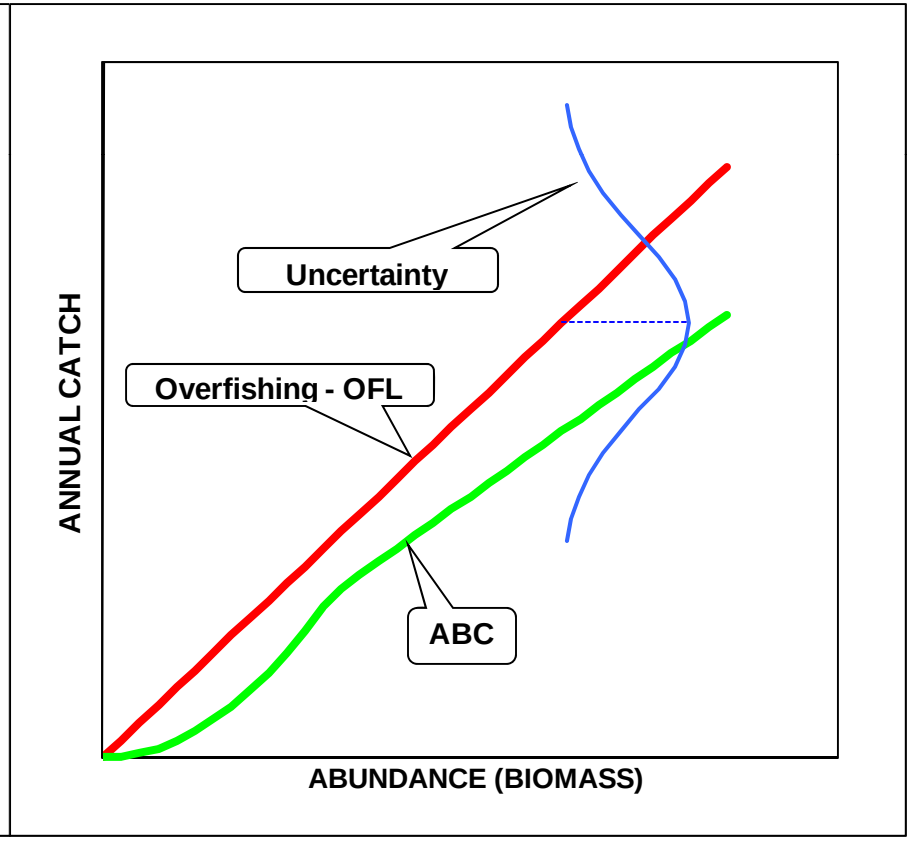
MSY and ABC Control Rule





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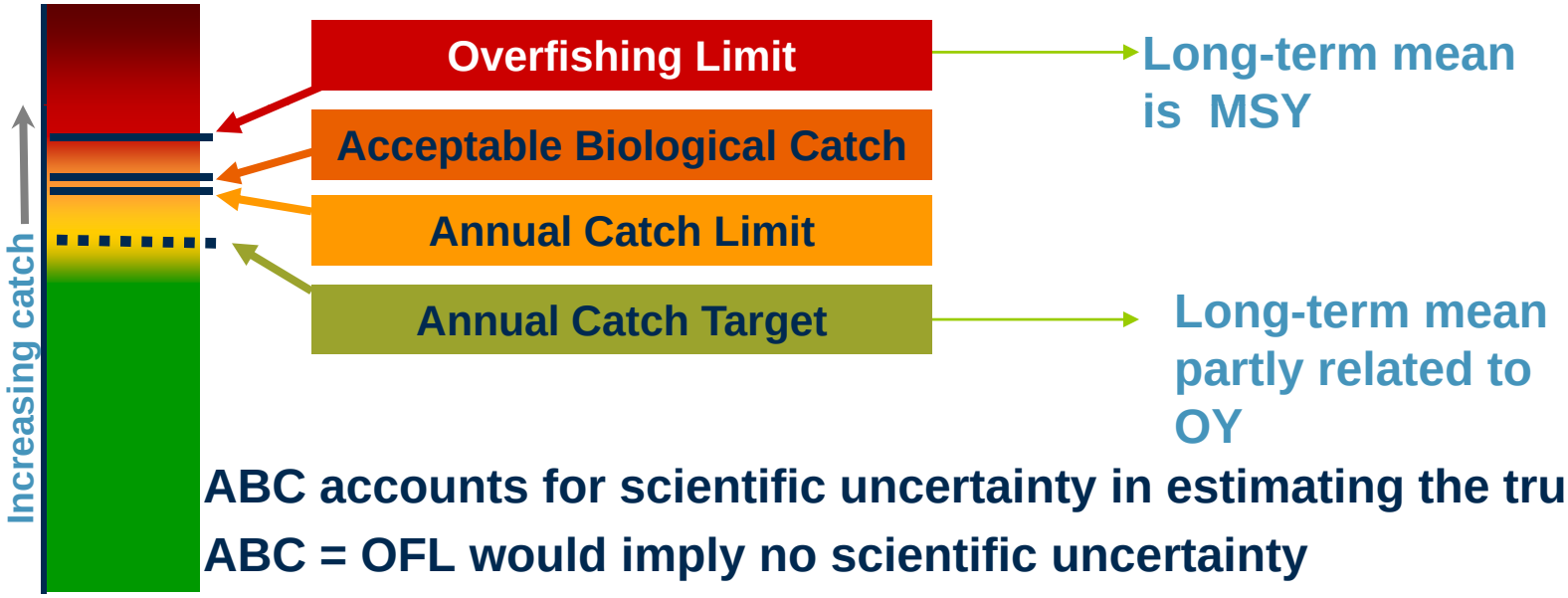
Annual Catch Reference Points per Nat. Std. 1 Guidelines - 2009



ABC accounts for scientific uncertainty in estimating the true OFL

ABC = OFL would imply no scientific uncertainty

ACL = ABC is OK, just the science-management hand-off

ACL is trigger for accountability

ACT = ACL, or no ACT, would imply perfect control of catch

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Science – Management Flow

Science informs development and evaluation of a potential harvest policy

- Shape, level, included factors in control rules
- Tradeoff analysis of buffer size vs. foregone catch & stock protection
- Tailored to expected information available for subject fisheries

Council adopts policy (the control rule) and codifies in FMP amendment

Annual implementation of policy according to Best Scientific Information Available

Science does not decide the policy; policy-makers cannot make informed policy without the science

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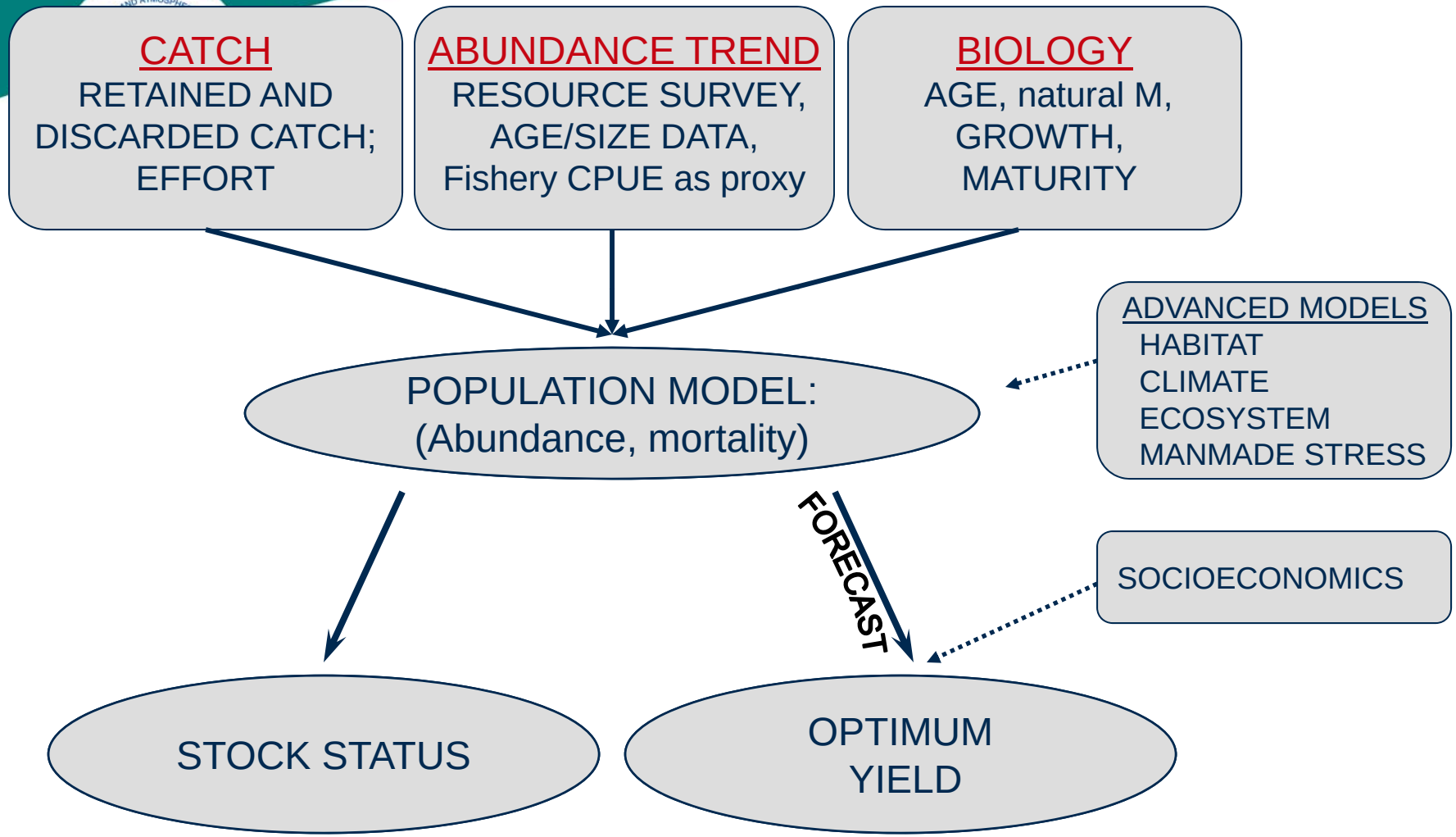
Stock Assessment Process



SESSIONS: Data needs / catch monitor / limited data / coop res. / uncertainty / ecosystem / soc-econ / tempo

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Performance Measures

In 2005, 230 stocks were identified as a important set to form the Fish Stock Sustainability Index (FSSI)

In addition to the FSSI, we separately track the % of FSSI Stocks with Adequate Assessments

- Tracking data for both housed in the Species Information System (with public SISPortal)

Adequate Means:

- Assessment capable of providing minimal status determination and ABC forecasting needs (SAIP level 3)
- Assessment has passed review process
- Assessment has been updated within past 5 years

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Bang for the Buck

Budgets are tight, but the Expand Annual Stock Assessments budget has been increasing. The close linkage to MSA mandates helps

Performance Measures provide a tangible indication of our success

Continued growth depends upon demonstrating that we are choosing wisely in which assessments to conduct, and are truly expanding the assessment output

But the cost of status quo also is going up, especially the costs of ship-based surveys

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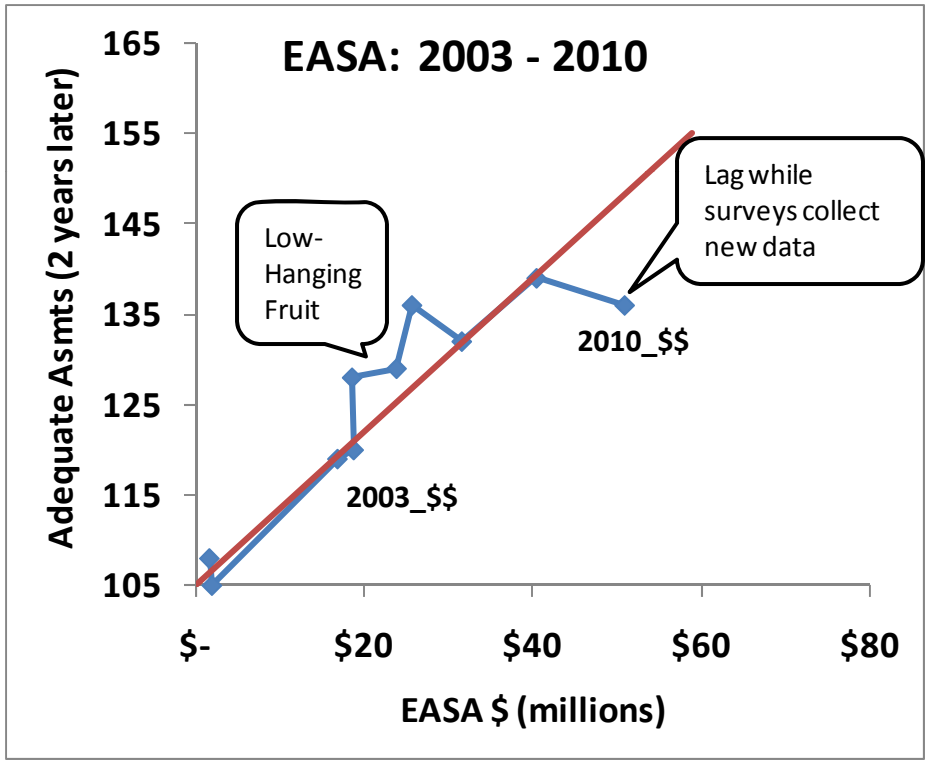
How Are We Doing for the 230 FSSI Stocks?

Year	Assess-ments Done	Stocks with Adeq. Asmt.
2000	37	106
2001	53	111
2002	64	106
2003	60	107
2004	63	108
2005	104	121
2006	71	121
2007	78	129
2008	76	131
2009	84	137
2010	TBD	132
2011	TBD	139
2012	TBD	136



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Prospects for FSSI Stocks by 2013

	Never adeq asmt	Adeq in 2013	Once Adeq, updateable	Total	%Adeq
Alaska	3	31	1	35	89%
Cal. Current	9	25	11	45	56%
Caribbean	8			8	0%
Gulf of Mexico	5	14	4	23	61%
International - Atl		5	3	8	63%
International - Pac	5	12	1	18	67%
Northeast	17	22	9	48	46%
Pacific Islands	4	2	1	7	29%
Southeast	13	16	9	38	42%
ALL	64	127	39	230	55%

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Assessment – Survey Linkage (prelim analysis from 2007)

Ecosystem	Primary Survey				
	FSV	CHARTER	Comm-CPUE	Recr-CPUE	NON-NMFS
Alaska	2	27			
Cal. Current	4	16	2	8	
Caribbean					3
Gulf of Mexico	8		3		1
International - Atl	1		7		
International - Pac			11		
Northeast	21		1		1
Pacific Islands			3		
Southeast	10		1	1	9
ALL	46	43	28	9	14

We have a ways to go; Tools vary by region

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Workshop Goals

- **Not the immediate implementation issues**
  - **Been the topic of the national SSC workshops (2008-2010, ongoing)**
  - **Regional details important**
- **Not ideas for fishery policy, that could be the next M.O.N.F.**
- **Not nirvana with all the resources we could ever want**

- **Yes**
  - **What's achievable in next 5 years?**
  - **Cost-effective, new approaches**
  - **Revised and standardized protocols to improve assessment throughput, communication and transparency**
  - **Science issues to bring to next M.O.N.F.**

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Workshop Topics

- **Collecting data needed for assessments.**
- **Improving fishery monitoring programs to better support stock assessments, ACL monitoring, and catch share programs**
- **Understanding impact of fisheries for the data-limited and minor stocks**
- **Using cooperative research to augment the needed assessment data**
- **Calculating, communicating and responding to uncertainty**
- **Bringing socio-economic considerations into OY specification**
- **Bringing ecosystem/climate/habitat into assessments and OY**
- **Building efficient and effective relationships among Science Centers, SSCs, and peer review systems in providing the best scientific information available for updating ACLs**

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Workshop Process

- Seven separate, but connected topics
- Two speakers kick-off each topic
- One hour moderated discussion following presentation of topic's trigger questions
- Rapporteur's from NMFS HQ will take notes
- Draft report with key issues and findings from each session will be prepared and circulated to all participants for further input
- Report will be made widely available